



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/401,439	09/22/1999	USAMA M. FAYYAD	115377.01	4688
22971 7590 04/11/2007 MICROSOFT CORPORATION ONE MICROSOFT WAY REDMOND, WA 98052-6399			EXAMINER TARAE, CATHERINE MICHELLE	
			ART UNIT	PAPER NUMBER
			3623	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/11/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/11/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

roks@microsoft.com
ntovar@microsoft.com
a-rydore@microsoft.com

Office Action Summary

Application No.

09/401,439

Applicant(s)

FAYYAD ET AL.

Examiner

C. Michelle Tarae

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,6,7,10-13,15-17,19,20 and 58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6,7,10-13,15-17,19,20 and 58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 11, 2007 has been entered.

Claims 1 and 58 have been amended. Claims 1, 6, 7, 10-13, 15-17, 19, 20 and 58 are now pending in this application.

Response to Amendment

2. Applicant's amendments to claims 1 and 58 are acknowledged.

Response to Arguments

3. Applicant's arguments with regard to the newly added limitation of observing and analyzing responses of the target subset of users to the presently conducted marketing campaign cycle at least partly in real-time are moot in view of the new grounds of rejections provided below.

Applicant's arguments with regard to the formation of a focused group based on the observed responses have been fully considered, but are found unpersuasive. In col. 20, lines 40-50, Sheppard discloses that based on customers' observed behavior to marketing campaigns, prospect lists are scored to identify those customers who are

most likely to respond to a future marketing campaign. Scoring customers from a list to identify them is forming a group of customers who share a particular score or range of scores, where the customer's score represents a type of response of "most likely to respond" (i.e., a favorable response). Thus, the customers identified from the prospect lists are formed into a focused group based on a (favorable) type of response.

Accordingly, Examiner respectfully submits that Sheppard does disclose the formation of a focused group based on the observed responses.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 and 58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not readily apparent which words, "observing" or "analyzing" or both, the newly added amendment of "at least partly in real-time" is supposed to be modifying. For examination purposes, Examiner is interpreting "at least partly in real-time" to be modifying "observing" since, in Applicant's arguments received on September 30, 2005, Applicant argued that user responses to a campaign are *tracked* in real time.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1, 6, 7, 10-13, 15-17, 19, 20 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheppard (U.S. 6,026,397) and Lazarus et al. (U.S. 6,134,532).

As per claims 1 and 58, Sheppard discloses a method for managing a marketing campaign and machine-readable medium having instructions stored thereon for execution by a processor to perform a method, comprising:

providing a data mining engine capable of being trained with training data and capable thereafter of performing inferences relative to the training data and on additional data (col. 5, lines 34-39; col. 13, lines 14-26; The system provides a neural clustering function, which is a data mining engine capable of being trained with training data, to perform inferences associated with the training data.);

providing a user database containing the observed characteristics of each one of a set of users, the characteristics comprising at least one of: (a) at least one of the user's attributes, (b) at least one of the user's preferences (col. 4, lines 43-47; col. 5, line 67-col. 6, line 5; Figure 1; The system analyzes a customer database that includes demographic and lifestyle data.);

training the data mining engine with a set of training data comprising the user database by clustering the user database into different segments of users distinguished by different states of one or more characteristics (col. 8, lines 5-13 and 34-41; col. 12, lines 21-26; col. 14, lines 9-26; The system uses a rule-based segmentation function to segment the user database according to various characteristics (i.e., married and non-married segments).);

inputting to the data mining engine a predetermined set of characteristics including a predetermined set of user attributes likely to pertain to a product to which the marketing campaign is directed and, in response thereto, obtaining from the data mining engine a subset of the users in the database having the highest correlation to the characteristic by determining which of the segments found during clustering of the user database has the highest statistical correlation to the predetermined set of characteristics (col. 14, lines 9-26; col. 18, lines 5-16; The system uses the neural clustering function to obtain a subset of users having a statistically significant correlation to a characteristic.);

determining in the data mining engine a set of prevalent attributes of the subset of users (col. 18, lines 10-16; The neural clustering function determines prevalent attributes of a subset of users having a statistically significant correlation to a characteristic.);

defining a target database of users and determining in the data mining engine a target subset of users in the target database statistically correlated to the set of prevalent attributes (col. 14, lines 9-26; col. 18, lines 5-16);

conducting a presently conducted marketing campaign cycle directed at the target subset of users and observing and analyzing responses of the target subset of users to the presently conducted marketing campaign cycle (col. 20, lines 32-40; The system learns from observing actual responses of current customers being targeted by a marketing campaign. The observed responses may then be stored in a database to predict future responses.);

forming a focused group of the target subset of users whose observed response was a particular type of response (col. 20, lines 40-50; Based on their observed behavior, prospect lists are scored to identify individuals who are most likely to respond to a future marketing campaign, where scoring individuals to identify them is placing them in a group of individuals who have a particular score or range of scores, and where a response of "most likely to respond" is a type of response (i.e., is considered a favorable response). Thus, the individuals identified from the prospect lists are formed into a focused group based on a favorable type of response.);

determining, in the data mining engine, a group of prevalent characteristics of the focused group of users (col. 20, lines 37-44; The observed responses (i.e., characteristics) are stored in a database for analysis and to predict future customer responses.); and

defining a database to be mined and determining, in the data mining engine, a new set of users in the database to be mined whose characteristics are statistically correlated with the group of prevalent characteristics (col. 13, line 65-col. 14, line 26; col. 18, lines 5-16; The system uses the neural clustering function to obtain a subset of

users having a statistically significant correlation to a characteristic. User subsets can be refined multiple times.).

Sheppard does not expressly disclose observing responses of the target subset of users to the presently conducted marketing campaign cycle *at least partly in real-time*. Lazarus discloses an Internet advertising system that tracks users' responses to targeted advertisements in real-time (col. 4, lines 45-53; col. 9, lines 39-41). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the teachings of Sheppard to include observing responses to a presently conducted marketing campaign cycle at least partly in real-time because doing so provides advertisers with the ability to track user behavioral characteristics in real-time, thereby providing an accurate and granular level of detail of user interests (see Lazarus col. 4, lines 39-53) which supports providing users a marketing campaign most appealing to them, which is a goal of Sheppard (see Sheppard col. 2, lines 29-32).

As per claim 6, Sheppard discloses the method of claim 1 wherein the target database comprises the user database with which the data mining engine has been trained (col. 4, lines 43-47; col. 5, line 67-col. 6, line 5; Figure 1; The system analyzes a customer database that includes demographic and lifestyle data.).

As per claim 7, Sheppard discloses the method of claim 1 wherein the target database comprises an additional database not included in the user database, the additional database defining characteristics of a set of new users (col. 5, line 65-col. 6, line 14; The system can conduct analyses on multiple databases.).

As per claim 10, Sheppard discloses the method of claim 1 wherein the database to be mined comprises the user database with which the data mining engine was trained (col. 4, lines 43-47; col. 5, line 67-col. 6, line 5; Figure 1).

As per claim 11, Sheppard discloses the method of claim 1 wherein the database to be mined comprises the target database of users (col. 4, lines 43-47; col. 5, line 67-col. 6, line 5; col. 13, line 65-col. 14, line 7).

As per claim 12, Sheppard discloses the method of claim 1 wherein the database to be mined comprises a new database not included in either the user database or in the target user database (col. 5, line 65-col. 6, line 14; col. 13, line 65-col. 14, line 7; The system can conduct analyses on multiple databases and further, has the ability to continuously refine user sets, thus creating new user databases with which to analyze.).

As per claim 13, Sheppard discloses the method of claim 1 further comprising: directing a subsequent marketing campaign cycle to the new set of users (col. 13, line 65-col. 14, line 7; col. 20, lines 32-50).

As per claim 15, Sheppard discloses the method of claim 1 wherein the user preference corresponds to a prior purchase of a product which is a subject of the marketing campaign (col. 2, lines 34-38; col. 20, lines 32-50).

As per claim 16, Sheppard discloses the method of claim 1 further comprising: determining, in the data mining engine, a complete set of statistically prevalent user attributes of the subset of users (col. 5, lines 33-45; col. 14, lines 9-26; col. 18, lines 5-16; The system uses the neural clustering function to obtain a subset of users having a statistically significant correlation to a characteristic.);

for any member of the subset of users having certain attributes which are undetermined in the user data base, filling in the certain undetermined attributes with the corresponding ones of the complete set of statistically prevalent user attributes of the subset of users (col. 16, lines 5-25; col. 17, lines 10-38; The system normalizes the parameters to offset data that is too dominant or too weak. The system also creates default values for fields in the database.).

As per claim 17, Sheppard discloses the method of claim 1 further comprising:
for any member of the target subset of users having certain attributes which are undetermined, filling in the certain undetermined attributes with the corresponding ones of the set of prevalent user attributes of the subset of users (col. 16, lines 5-25; col. 17, lines 10-38; The system normalizes the parameters to offset data that is too dominant or too weak. The system also creates default values for fields in the database.).

As per claim 19, Sheppard discloses the method of claim 1 wherein clustering comprises: providing with a visualization tool a tabulation of characteristics of each user group with the probability of each characteristic in the cluster (col. 9, lines 9-11 and 15-25; col. 10, lines 10-36; Figure 4; The system creates "bins" of segmented users and creates histograms that provides visual statistical information relating to the bins.);

labeling each cluster with a statistically predominant characteristic thereof in accordance with the tabulation (col. 10, lines 2-9).

As per claim 20, Sheppard discloses the method of claim 19 wherein the statistically predominant characteristic of each cluster distinguishes the cluster from the other clusters (col. 13, lines 18-26; col. 14, lines 9-26; The groups are segmented

according to statistically prevalent characteristics that are different from cluster to cluster.).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Schroeder et al. (U.S. 6,760,727) discusses tracking user responses to advertising campaigns;
- Garrick et al. (U.S. 5,968,125) discusses tracking a user's behavior on a website in real-time.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Michelle Tarae whose telephone number is 571-272-6727. The examiner can normally be reached Monday – Friday from 8:30am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz, can be reached at 571-272-6729.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Application/Control Number: 09/401,439

Page 11

Art Unit: 3623

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "C. Michelle Tarae". The signature is fluid and cursive, with a large initial "C" and a long, sweeping underline.

C. MICHELLE TARAE
PRIMARY EXAMINER

March 22, 2007